

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
Hazardous Materials and Waste Management Division



INTEROFFICE COMMUNICATION

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FROM Elizabeth Pottoroff *Elizabeth*

DATE December 18, 1998

SUBJECT Plume Source Modeling above Proposed East Trenches Remediation

I investigated the source term of this plume as discussed in our meeting of 12/10/98 I used a simple analytical model that I had available in-house, Plume-3D in the Solute package of models It is written by Paul van der Heijde and M S Beljin, available from the International Ground Water Modeling Center This models 3 dimensional transport of a plume from one or more limited duration point sources in a uniform ground-water flow field

I used site estimated parameters to develop a model that gave a reasonable, although not exact, rendition of the current plume configuration I tested many combinations of flow and source parameters and was not able to represent the plume any better than the 30 year model version (attached) which simulates the present tetrachloroethene configuration presented in the draft PAM I then ran the model for 40, 50 and 100 years, also attached These model runs showed the plume continuing to move toward the intercept location and surface water location for many years, however because of the source removal concentrations will increase only slightly at the intercept system, then remain almost constant for at least the time period modeled 70 years from present This modeling exercise does not account for any degradation by dehalogenation or volatilization, nor any changes in the hydrologic system of the plume or stream For this reason I recommend a more versatile model such as Modflow-Surfact used by McLane Environmental on the Solar Ponds Plume to evaluate this information in the future

The following logic was used in setting up the model

Ground Water Seepage Velocity - 0.02 m/d The site calculated geometric mean hydraulic conductivity of 0.68 m/d multiplied by a ground water gradient of 0.02, adjusted downward to achieve the best results

Porosity - 0.2 within the range of site measured values Modeling was sensitive to this parameter

Dispersivities Longitudinal, transverse and vertical dispersivities were adjusted by trial and error to achieve the best results

Retardation - 3 Represents a contaminant retarded in ground water by a factor of 3, also tested by trial and error

Physical framework The model was oriented so that the primary direction of ground water flow in the plume coincided with the X axis of the model. The Arapahoe sandstone is contoured as more than 30 feet thick in the vicinity of Trench T-3 and maintains that thickness more than half way to the proposed intercept where the thickness is mapped at 18 feet. The model represents 220 meters in the X direction with 22 rows of 10 m increments. The Y direction was set at 11 columns of 30 m each to try to represent the full width of apparent dispersion in the plume. The Z direction was defined as 10 one meter increments. The grid origin represents the lower left corner and the top of the Arapahoe sandstone of the plume.

Source terms The vertical thickness was divided into 1 meter thick sources, the model allowed 10 discreet sources. The top source was used to simulate a high concentration (50 mg/L) input to the top of the sandstone and was turned off at 29 years to reflect the source removal. A concentration of 5 mg/L was allocated between the next 8 vertical source locations and allowed to continue for 3 years past the source removal. This is an assumption based on 2 years of performance monitoring which has shown no decreases in concentration, and may therefore be an optimistic assumption. The bottom source was given a very small concentration and used to control the timing of the model to 40, 50 and 100 years. The source terms were adjusted by trial and error in the 30 year model and give reasonably good agreement with the concentration of 1550 ug/L immediately down gradient of the trench and with concentrations of 730 and 560 ug/L at the wells installed along the proposed intercept system.

* *					
* INTERNATIONAL GROUND WATER MODELING CENTER *					
* *					
* SOLUTE version 3,0 *					
* *					
* ANALYTICAL MODELS FOR SOLUTE TRANSPORT *					
* *					

Model PLUME3D					
PROJECT	= east trenches				
USER NAME	= pottorff				
DATE	= 12-18-1998				
DATA FILE	= c \dosapp\solute\etp30.dat				
INPUT DATA					
GROUNDWATER (SEEPAGE) VELOCITY = 02 [m/d]					
POROSITY	= 2				
LONGITUDINAL DISPERSIVITY	= 6 [m]				
LATERAL DISPERSIVITY	= 5 [m]				
VERTICAL DISPERSIVITY	= 3 [m]				
HALF-LIFE	= 0 [d]				
NUMBER OF POINT SOURCES	= 10				
SOURCE NO 1					
X-COORDINATE OF THE SOURCE	= 30 [m]				
Y-COORDINATE OF THE SOURCE	= 82 [m]				
Z-COORDINATE OF THE SOURCE	= 0 [m]				
SOURCE STRENGTH	= 00225 [kg/d]				
ELAPSED TIME	= 10585 [d]				
SOURCE NO 2					
X-COORDINATE OF THE SOURCE	= 30 [m]				
Y-COORDINATE OF THE SOURCE	= 82 [m]				
Z-COORDINATE OF THE SOURCE	= 1 [m]				
SOURCE STRENGTH	= 0003 [kg/d]				
ELAPSED TIME	= 10950 [d]				
SOURCE NO 3					

X-COORDINATE OF THE SOURCE	= 30 [m]	
Y-COORDINATE OF THE SOURCE	= 82 [m]	
Z-COORDINATE OF THE SOURCE	= 2 [m]	
SOURCE STRENGTH	= 0003 [kg/d]	
ELAPSED TIME	= 10950 [d]	
SOURCE NO 4		
X-COORDINATE OF THE SOURCE	= 30 [m]	
Y-COORDINATE OF THE SOURCE	= 82 [m]	
Z-COORDINATE OF THE SOURCE	= 3 [m]	
SOURCE STRENGTH	= 0003 [kg/d]	
ELAPSED TIME	= 10950 [d]	
SOURCE NO 5		
X-COORDINATE OF THE SOURCE	= 30 [m]	
Y-COORDINATE OF THE SOURCE	= 82 [m]	
Z-COORDINATE OF THE SOURCE	= 4 [m]	
SOURCE STRENGTH	= 0003 [kg/d]	
ELAPSED TIME	= 10950 [d]	
SOURCE NO 6		
X-COORDINATE OF THE SOURCE	= 30 [m]	
Y-COORDINATE OF THE SOURCE	= 82 [m]	
Z-COORDINATE OF THE SOURCE	= 5 [m]	
SOURCE STRENGTH	= 0003 [kg/d]	
ELAPSED TIME	= 10950 [d]	
SOURCE NO 7		
X-COORDINATE OF THE SOURCE	= 30 [m]	
Y-COORDINATE OF THE SOURCE	= 82 [m]	
Z-COORDINATE OF THE SOURCE	= 6 [m]	
SOURCE STRENGTH	= 0003 [kg/d]	
ELAPSED TIME	= 10950 [d]	
SOURCE NO 8		
X-COORDINATE OF THE SOURCE	= 30 [m]	
Y-COORDINATE OF THE SOURCE	= 82 [m]	
Z-COORDINATE OF THE SOURCE	= 7 [m]	
SOURCE STRENGTH	= 0003 [kg/d]	
ELAPSED TIME	= 10950 [d]	
SOURCE NO 9		
X-COORDINATE OF THE SOURCE	= 30 [m]	
Y-COORDINATE OF THE SOURCE	= 82 [m]	
Z-COORDINATE OF THE SOURCE	= 8 [m]	
SOURCE STRENGTH	= 0003 [kg/d]	
ELAPSED TIME	= 10950 [d]	
SOURCE NO 10		

X-COORDINATE OF THE SOURCE	= 30 [m]					
Y-COORDINATE OF THE SOURCE	= 82 [m]					
Z-COORDINATE OF THE SOURCE	= 9 [m]					
SOURCE STRENGTH	= 000001 [kg/d]					
ELAPSED TIME	= 10950 [d]					
GRID DATA						
X-COORDINATE OF GRID ORIGIN	= 0 [m]					
Y-COORDINATE OF GRID ORIGIN	= 0 [m]					
Z-COORDINATE OF GRID ORIGIN	= 0 [m]					
DISTANCE INCREMENT DELX	= 10 [m]					
DISTANCE INCREMENT DELY	= 30 [m]					
DISTANCE INCREMENT DELZ	= 10 [m]					
NUMBER OF NODES IN X-DIRECTION	= 23					
NUMBER OF NODES IN Y-DIRECTION	= 11					
NUMBER OF NODES IN Z-DIRECTION	= 3					
CONCENTRATION C [mg/l] - LAYER 1						
ROWCOLUMN	1	2	3	4	5	
[m]	0 00	10 00	20 00	30 00	40 00	
1	0 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	9 3919D-04	2 0432D-03
2	30 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 8452D-02	3 9501D-02
3	60 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	2 8304D-01	5 4432D-01
4	90 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 5244D+00	1 9501D+00
5	120 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	6 4299D-02	1 3441D-01
6	150 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	4 0670D-03	8 8069D-03
7	180 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 4194D-04	3 0957D-04
8	210 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 9742D-06	4 3124D-06
9	240 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	9 5048D-09	2 0767D-08
10	270 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 4839D-11	3 2415D-11
11	300 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	7 2867D-15	1 5913D-14
ROWCOLUMN	6	7	8	9	10	
[m]	50 00	60 00	70 00	80 00	90 00	
1	0 00 [m]	3 9756D-03	6 9320D-03	1 0858D-02	1 5317D-02	1 9503D-02
2	30 00 [m]	7 3546D-02	1 2054D-01	1 7634D-01	2 3296D-01	2 8000D-01
3	60 00 [m]	7 9655D-01	1 0118D+00	1 1955D+00	1 3424D+00	1 4338D+00

4	90 00 [m]	1 8488D+00	1 8428D+00	1 9044D+00	1 9786D+00	2 0164D+00
5	120 00 [m]	2 3544D-01	3 5739D-01	4 8538D-01	6 0210D-01	6 8885D-01
6	150 00 [m]	1 6918D-02	2 8952D-02	4 4380D-02	6 1262D-02	7 6468D-02
7	180 00 [m]	6 0672D-04	1 0693D-03	1 6965D-03	2 4254D-03	3 1280D-03
8	210 00 [m]	8 4903D-06	1 5067D-05	2 4106D-05	3 4774D-05	4 5236D-05
9	240 00 [m]	4 0910D-08	7 2663D-08	1 1637D-07	1 6803D-07	2 1876D-07
10	270 00 [m]	6 3814D-11	1 1322D-10	1 8101D-10	2 6078D-10	3 3849D-10
11	300 00 [m]	3 1301D-14	5 5456D-14	8 8491D-14	1 2717D-13	1 6457D-13
ROW	COLUMN	11	12	13	14	15
[m]	100 00	110 00	120 00	130 00	140 00	
1	0 00 [m]	2 2450D-02	2 3383D-02	2 2045D-02	1 8808D-02	1 4513D-02
2	30 00 [m]	3 0734D-01	3 0838D-01	2 8265D-01	2 3627D-01	1 7975D-01
3	60 00 [m]	1 4476D+00	1 3704D+00	1 2067D+00	9 8154D-01	7 3327D-01
4	90 00 [m]	1 9770D+00	1 8370D+00	1 5983D+00	1 2900D+00	9 5892D-01
5	120 00 [m]	7 2875D-01	7 1195D-01	6 4034D-01	5 2828D-01	3 9836D-01
6	150 00 [m]	8 6535D-02	8 8898D-02	8 2921D-02	7 0191D-02	5 3869D-02
7	180 00 [m]	3 6417D-03	3 8292D-03	3 6368D-03	3 1196D-03	2 4161D-03
8	210 00 [m]	5 3069D-05	5 6148D-05	5 3572D-05	4 6091D-05	3 5756D-05
9	240 00 [m]	2 5680D-07	2 7184D-07	2 5879D-07	2 2120D-07	1 7093D-07
10	270 00 [m]	3 9581D-10	4 1689D-10	3 9544D-10	3 3773D-10	2 5966D-10
11	300 00 [m]	1 9175D-13	2 0115D-13	1 8994D-13	1 6142D-13	1 2344D-13
ROW	COLUMN	16	17	18	19	20
[m]	150 00	160 00	170 00	180 00	190 00	
1	0 00 [m]	1 0122D-02	6 3757D-03	3 6240D-03	1 8579D-03	8 5882D-04
2	30 00 [m]	1 2421D-01	7 7804D-02	4 4100D-02	2 2584D-02	1 0437D-02
3	60 00 [m]	5 0072D-01	3 1133D-01	1 7571D-01	8 9787D-02	4 1461D-02
4	90 00 [m]	6 5271D-01	4 0503D-01	2 2832D-01	1 1660D-01	5 3827D-02
5	120 00 [m]	2 7367D-01	1 7080D-01	9 6610D-02	4 9424D-02	2 2833D-02
6	150 00 [m]	3 7439D-02	2 3534D-02	1 3364D-02	6 8493D-03	3 1660D-03
7	180 00 [m]	1 6888D-03	1 0648D-03	6 0546D-04	3 1042D-04	1 4355D-04
8	210 00 [m]	2 5010D-05	1 5777D-05	8 9464D-06	4 5392D-06	2 0828D-06
9	240 00 [m]	1 1893D-07	7 4489D-08	4 1985D-08	2 1289D-08	9 7088D-09
10	270 00 [m]	1 7968D-10	1 1188D-10	6 2666D-11	3 1568D-11	1 4299D-11
11	300 00 [m]	8 4931D-14	5 2561D-14	2 9253D-14	1 4639D-14	6 5855D-15
ROW	COLUMN	21	22	23		

	[m]	200 00	210 00	220 00		
ROW	COLUMN	1	2	3	4	5
1	0 00 [m]	3 5808D-04	1 3322D-04	4 4786D-05		
2	30 00 [m]	4 3499D-03	1 6349D-03	5 5176D-04		
3	60 00 [m]	1 7277D-02	6 4926D-03	2 2005D-03		
4	90 00 [m]	2 2429D-02	8 4283D-03	2 8564D-03		
5	120 00 [m]	9 5158D-03	3 5761D-03	1 2091D-03		
6	150 00 [m]	1 3196D-03	4 9483D-04	1 6604D-04		
7	180 00 [m]	5 9236D-05	2 2098D-05	7 4106D-06		
8	210 00 [m]	8 5952D-07	3 1888D-07	1 0632D-07		
9	240 00 [m]	3 9808D-09	1 4671D-09	4 8584D-10		
10	270 00 [m]	5 8221D-12	2 1304D-12	7 0041D-13		
11	300 00 [m]	2 6626D-15	9 6730D-16	3 1570D-16		
CONCENTRATION C [mg/l] - LAYER 2						
ROW	COLUMN	1	2	3	4	5
	[m]	0 00	10 00	20 00	30 00	40 00
1	0 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	8 8694D-04	1 9298D-03
2	30 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 7112D-02	3 6664D-02
3	60 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	2 3603D-01	4 6110D-01
4	90 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	9 0594D-01	1 3746D+00
5	120 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	5 8181D-02	1 2196D-01
6	150 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	3 8192D-03	8 2729D-03
7	180 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 3458D-04	2 9353D-04
8	210 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 8810D-06	4 1091D-06
9	240 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	9 0972D-09	1 9877D-08
10	270 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 4272D-11	3 1177D-11
11	300 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	7 0445D-15	1 5384D-14
ROW	COLUMN	6	7	8	9	10
	[m]	50 00	60 00	70 00	80 00	90 00
1	0 00 [m]	3 7567D-03	6 5548D-03	1 0276D-02	1 4509D-02	1 8492D-02
2	30 00 [m]	6 8427D-02	1 1251D-01	1 6517D-01	2 1890D-01	2 6383D-01
3	60 00 [m]	6 9586D-01	9 0793D-01	1 0932D+00	1 2429D+00	1 3386D+00
4	90 00 [m]	1 5088D+00	1 6093D+00	1 7203D+00	1 8210D+00	1 8765D+00
5	120 00 [m]	2 1509D-01	3 2918D-01	4 5048D-01	5 6229D-01	6 4641D-01
6	150 00 [m]	1 5906D-02	2 7255D-02	4 1844D-02	5 7853D-02	7 2322D-02
7	180 00 [m]	5 7542D-04	1 0145D-03	1 6104D-03	2 3038D-03	2 9732D-03
8	210 00 [m]	8 0912D-06	1 4363D-05	2 2986D-05	3 3172D-05	4 3173D-05
9	240 00 [m]	3 9162D-08	6 9573D-08	1 1145D-07	1 6099D-07	2 0969D-07

10	270	00	[m]	6	1383D-11	1	0893D-10	1	7420D-10	2	5104D-10	3	2598D-10
11	300	00	[m]	3	0264D-14	5	3629D-14	8	5595D-14	1	2304D-13	1	5929D-13
ROWCOLUMN		11		12		13		14		15			
	[m]	100	00	110	00	120	00	130	00	140	00		
1	0	00	[m]	2	1308D-02	2	2217D-02	2	0966D-02	1	7906D-02	1	3832D-02
2	30	00	[m]	2	9027D-01	2	9184D-01	2	6794D-01	2	2430D-01	1	7088D-01
3	60	00	[m]	1	3591D+00	1	2916D+00	1	1406D+00	9	2979D-01	6	9585D-01
4	90	00	[m]	1	8527D+00	1	7295D+00	1	5096D+00	1	2214D+00	9	0963D-01
5	120	00	[m]	6	8635D-01	6	7241D-01	6	0611D-01	5	0095D-01	3	7833D-01
6	150	00	[m]	8	1962D-02	8	4313D-02	7	8743D-02	6	6734D-02	5	1275D-02
7	180	00	[m]	3	4641D-03	3	6453D-03	3	4651D-03	2	9750D-03	2	3063D-03
8	210	00	[m]	5	0678D-05	5	3653D-05	5	1228D-05	4	4110D-05	3	4248D-05
9	240	00	[m]	2	4629D-07	2	6087D-07	2	4852D-07	2	1254D-07	1	6437D-07
10	270	00	[m]	3	8136D-10	4	0189D-10	3	8144D-10	3	2599D-10	2	5082D-10
11	300	00	[m]	1	8568D-13	1	9487D-13	1	8411D-13	1	5655D-13	1	1980D-13
ROWCOLUMN		16		17		18		19		20			
	[m]	150	00	160	00	170	00	180	00	190	00		
1	0	00	[m]	9	6572D-03	6	0895D-03	3	4653D-03	1	7787D-03	8	2325D-04
2	30	00	[m]	1	1823D-01	7	4150D-02	4	2081D-02	2	1577D-02	9	9848D-03
3	60	00	[m]	4	7590D-01	2	9631D-01	1	6746D-01	8	5686D-02	3	9621D-02
4	90	00	[m]	6	2016D-01	3	8539D-01	2	1755D-01	1	1125D-01	5	1427D-02
5	120	00	[m]	2	6028D-01	1	6266D-01	9	2123D-02	4	7191D-02	2	1830D-02
6	150	00	[m]	3	5677D-02	2	2452D-02	1	2765D-02	6	5505D-03	3	0318D-03
7	180	00	[m]	1	6136D-03	1	0185D-03	5	7978D-04	2	9761D-04	1	3780D-04
8	210	00	[m]	2	3978D-05	1	5141D-05	8	5958D-06	4	3653D-06	2	0053D-06
9	240	00	[m]	1	1446D-07	7	1758D-08	4	0485D-08	2	0550D-08	9	3814D-09
10	270	00	[m]	1	7370D-10	1	0824D-10	6	0681D-11	3	0597D-11	1	3872D-11
11	300	00	[m]	8	2476D-14	5	1078D-14	2	8450D-14	1	4248D-14	6	4146D-15
ROWCOLUMN		21		22		23							
	[m]	200	00	210	00	220	00						
1	0	00	[m]	3	4370D-04	1	2803D-04	4	3102D-05				
2	30	00	[m]	4	1671D-03	1	5684D-03	5	2977D-04				
3	60	00	[m]	1	6533D-02	6	2219D-03	2	1120D-03				
4	90	00	[m]	2	1458D-02	8	0753D-03	2	7408D-03				

ROW	COLUMN	11	12	13	14	15	
	[m]	100 00	110 00	120 00	130 00	140 00	
1	0 00 [m]	1 6433D-02	1 7175D-02	1 6242D-02	1 3897D-02	1 0752D-02	
2	30 00 [m]	2 2046D-01	2 2313D-01	2 0592D-01	1 7307D-01	1 3225D-01	
3	60 00 [m]	1 0095D+00	9 7366D-01	8 6858D-01	7 1309D-01	5 3635D-01	
4	90 00 [m]	1 3664D+00	1 2983D+00	1 1467D+00	9 3527D-01	7 0042D-01	
5	120 00 [m]	5 1595D-01	5 1066D-01	4 6373D-01	3 8535D-01	2 9220D-01	
6	150 00 [m]	6 2835D-02	6 4889D-02	6 0797D-02	5 1661D-02	3 9780D-02	
7	180 00 [m]	2 6843D-03	2 8287D-03	2 6925D-03	2 3146D-03	1 7964D-03	
8	210 00 [m]	3 9492D-05	4 1839D-05	3 9978D-05	3 4450D-05	2 6771D-05	
9	240 00 [m]	1 9276D-07	2 0431D-07	1 9475D-07	1 6655D-07	1 2888D-07	
10	270 00 [m]	2 9947D-10	3 1572D-10	2 9979D-10	2 5634D-10	1 9734D-10	
11	300 00 [m]	1 4636D-13	1 5366D-13	1 4523D-13	1 2355D-13	9 4583D-14	
ROW	COLUMN	16	17	18	19	20	
	[m]	150 00	160 00	170 00	180 00	190 00	
1	0 00 [m]	7 5174D-03	4 7462D-03	2 7042D-03	1 3897D-03	6 4403D-04	
2	30 00 [m]	9 1722D-02	5 7638D-02	3 2763D-02	1 6824D-02	7 7957D-03	
3	60 00 [m]	3 6815D-01	2 2985D-01	1 3017D-01	6 6722D-02	3 0898D-02	
4	90 00 [m]	4 7942D-01	2 9880D-01	1 6905D-01	8 6602D-02	4 0096D-02	
5	120 00 [m]	2 0162D-01	1 2630D-01	7 1664D-02	3 6768D-02	1 7033D-02	
6	150 00 [m]	2 7728D-02	1 7477D-02	9 9504D-03	5 1126D-03	2 3693D-03	
7	180 00 [m]	1 2583D-03	7 9507D-04	4 5309D-04	2 3285D-04	1 0769D-04	
8	210 00 [m]	1 8761D-05	1 1859D-05	6 6984D-06	3 4229D-06	1 5738D-06	
9	240 00 [m]	8 9811D-08	5 6342D-08	3 1811D-08	1 6159D-08	7 3830D-09	
10	270 00 [m]	1 3674D-10	8 5264D-11	4 7832D-11	2 4134D-11	1 0950D-11	
11	300 00 [m]	6 5151D-14	4 0370D-14	2 2498D-14	1 1274D-14	5 0785D-15	
ROW	COLUMN	21	22	23			
	[m]	200 00	210 00	220 00			
1	0 00 [m]	2 6863D-04	1 0034D-04	3 3817D-05			
2	30 00 [m]	3 2579D-03	1 2280D-03	4 1363D-04			
3	60 00 [m]	1 2912D-02	4 8660D-03	1 6543D-03			
4	90 00 [m]	1 6755D-02	6 3142D-03	2 1464D-03			
5	120 00 [m]	7 1182D-03	2 6827D-03	9 0971D-04			
6	150 00 [m]	9 9021D-04	3 7233D-04	1 2516D-04			
7	180 00 [m]	4 4616D-05	1 6683D-05	5 6080D-06			
8	210 00 [m]	6 5083D-07	2 4198D-07	8 0861D-08			
9	240 00 [m]	3 0331D-09	1 1200D-09	3 7165D-10			
10	270 00 [m]	4 4659D-12	1 6370D-12	5 3913D-13			

11	300	00 [m]	2	0562D-15	7	4809D-16	2	4451D-16	

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*	INTERNATIONAL GROUND WATER MODELING CENTER	*		
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*	SOLUTE version 3,0	*		
*		*		
*	ANALYTICAL MODELS FOR SOLUTE TRANSPORT	*		
*		*		
*****	*****	*****	*****	*****
Model PLUME3D				
PROJECT	= east trenches			
USER NAME	= pottorff			
DATE	= 12-18-1998			
DATA FILE	= c:\dosapp\solute\etp40.dat			
INPUT DATA				
GROUNDWATER (SEEPAGE) VELOCITY	= 02 [m/d]			
POROSITY	= 2			
LONGITUDINAL DISPERSIVITY	= 6 [m]			
LATERAL DISPERSIVITY	= 5 [m]			
VERTICAL DISPERSIVITY	= 3 [m]			
HALF-LIFE	= 0 [d]			
NUMBER OF POINT SOURCES	= 10			
SOURCE NO 1				
X-COORDINATE OF THE SOURCE	= 30 [m]			
Y-COORDINATE OF THE SOURCE	= 82 [m]			
Z-COORDINATE OF THE SOURCE	= 0 [m]			
SOURCE STRENGTH	= 00225 [kg/d]			
ELAPSED TIME	= 10585 [d]			
SOURCE NO 2				
X-COORDINATE OF THE SOURCE	= 30 [m]			
Y-COORDINATE OF THE SOURCE	= 82 [m]			
Z-COORDINATE OF THE SOURCE	= 1 [m]			
SOURCE STRENGTH	= 0003 [kg/d]			
ELAPSED TIME	= 11680 [d]			
SOURCE NO 3				

X-COORDINATE OF THE SOURCE	= 30 [m]			
Y-COORDINATE OF THE SOURCE	= 82 [m]			
Z-COORDINATE OF THE SOURCE	= 2 [m]			
SOURCE STRENGTH	= 0003 [kg/d]			
ELAPSED TIME	= 11680 [d]			
SOURCE NO 4				
X-COORDINATE OF THE SOURCE	= 30 [m]			
Y-COORDINATE OF THE SOURCE	= 82 [m]			
Z-COORDINATE OF THE SOURCE	= 3 [m]			
SOURCE STRENGTH	= 0003 [kg/d]			
ELAPSED TIME	= 11680 [d]			
SOURCE NO 5				
X-COORDINATE OF THE SOURCE	= 30 [m]			
Y-COORDINATE OF THE SOURCE	= 82 [m]			
Z-COORDINATE OF THE SOURCE	= 4 [m]			
SOURCE STRENGTH	= 0003 [kg/d]			
ELAPSED TIME	= 11680 [d]			
SOURCE NO 6				
X-COORDINATE OF THE SOURCE	= 30 [m]			
Y-COORDINATE OF THE SOURCE	= 82 [m]			
Z-COORDINATE OF THE SOURCE	= 5 [m]			
SOURCE STRENGTH	= 0003 [kg/d]			
ELAPSED TIME	= 11680 [d]			
SOURCE NO 7				
X-COORDINATE OF THE SOURCE	= 30 [m]			
Y-COORDINATE OF THE SOURCE	= 82 [m]			
Z-COORDINATE OF THE SOURCE	= 6 [m]			
SOURCE STRENGTH	= 0003 [kg/d]			
ELAPSED TIME	= 11680 [d]			
SOURCE NO 8				
X-COORDINATE OF THE SOURCE	= 30 [m]			
Y-COORDINATE OF THE SOURCE	= 82 [m]			
Z-COORDINATE OF THE SOURCE	= 7 [m]			
SOURCE STRENGTH	= 0003 [kg/d]			
ELAPSED TIME	= 11680 [d]			
SOURCE NO 9				
X-COORDINATE OF THE SOURCE	= 30 [m]			
Y-COORDINATE OF THE SOURCE	= 82 [m]			
Z-COORDINATE OF THE SOURCE	= 8 [m]			
SOURCE STRENGTH	= 0003 [kg/d]			
ELAPSED TIME	= 11680 [d]			
SOURCE NO 10				

X-COORDINATE OF THE SOURCE	= 30 [m]				
Y-COORDINATE OF THE SOURCE	= 82 [m]				
Z-COORDINATE OF THE SOURCE	= 9 [m]				
SOURCE STRENGTH	= 000001 [kg/d]				
ELAPSED TIME	= 14600 [d]				
GRID DATA					
X-COORDINATE OF GRID ORIGIN	= 0 [m]				
Y-COORDINATE OF GRID ORIGIN	= 0 [m]				
Z-COORDINATE OF GRID ORIGIN	= 0 [m]				
DISTANCE INCREMENT DELX	= 10 [m]				
DISTANCE INCREMENT DELY	= 30 [m]				
DISTANCE INCREMENT DELZ	= 10 [m]				
NUMBER OF NODES IN X-DIRECTION	= 23				
NUMBER OF NODES IN Y-DIRECTION	= 11				
NUMBER OF NODES IN Z-DIRECTION	= 3				
CONCENTRATION C [mg/l] - LAYER 1					
ROWCOLUMN	1	2	3	4	5
[m]	0 00	10 00	20 00	30 00	40 00
1 0 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 0519D-03	2 2928D-03
2 30 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 9096D-02	4 0934D-02
3 60 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	2 8447D-01	5 4752D-01
4 90 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 5260D+00	1 9537D+00
5 120 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	6 5334D-02	1 3672D-01
6 150 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	4 3565D-03	9 4493D-03
7 180 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 7060D-04	3 7289D-04
8 210 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	2 8996D-06	6 3512D-06
9 240 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 9012D-08	4 1674D-08
10 270 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	4 6291D-11	1 0152D-10
11 300 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	4 1606D-14	9 1289D-14
ROWCOLUMN	6	7	8	9	10
[m]	50 00	60 00	70 00	80 00	90 00
1 0 00 [m]	4 4870D-03	7 9004D-03	1 2549D-02	1 8036D-02	2 3514D-02
2 30 00 [m]	7 6530D-02	1 2633D-01	1 8678D-01	2 5035D-01	3 0664D-01
3 60 00 [m]	8 0335D-01	1 0254D+00	1 2208D+00	1 3862D+00	1 5035D+00

4	90 00 [m]	1 8566D+00	1 8584D+00	1 9339D+00	2 0302D+00	2 0991D+00
5	120 00 [m]	2 4030D-01	3 6696D-01	5 0292D-01	6 3185D-01	7 3530D-01
6	150 00 [m]	1 8243D-02	3 1487D-02	4 8869D-02	6 8590D-02	8 7461D-02
7	180 00 [m]	7 3565D-04	1 3111D-03	2 1134D-03	3 0856D-03	4 0859D-03
8	210 00 [m]	1 2608D-05	2 2685D-05	3 7012D-05	5 4776D-05	7 3564D-05
9	240 00 [m]	8 2902D-08	1 4967D-07	2 4528D-07	3 6492D-07	4 9296D-07
10	270 00 [m]	2 0222D-10	3 6327D-10	5 9658D-10	8 8991D-10	1 2059D-09
11	300 00 [m]	1 8214D-13	3 3052D-13	5 4522D-13	8 1904D-13	1 1204D-12
ROW	COLUMN	11	12	13	14	15
[m]	100 00	110 00	120 00	130 00	140 00	
1	0 00 [m]	2 7867D-02	3 0063D-02	2 9549D-02	2 6471D-02	2 1615D-02
2	30 00 [m]	3 4473D-01	3 5625D-01	3 3839D-01	2 9515D-01	2 3606D-01
3	60 00 [m]	1 5490D+00	1 5044D+00	1 3675D+00	1 1561D+00	9 0427D-01
4	90 00 [m]	2 0984D+00	1 9988D+00	1 7938D+00	1 5035D+00	1 1692D+00
5	120 00 [m]	7 9512D-01	7 9838D-01	7 4257D-01	6 3784D-01	5 0450D-01
6	150 00 [m]	1 0164D-01	1 0785D-01	1 0456D-01	9 2645D-02	7 4990D-02
7	180 00 [m]	4 9130D-03	5 3691D-03	5 3364D-03	4 8257D-03	3 9713D-03
8	210 00 [m]	8 9690D-05	9 9310D-05	9 9897D-05	9 1317D-05	7 5877D-05
9	240 00 [m]	6 0481D-07	6 7413D-07	6 8213D-07	6 2795D-07	5 2585D-07
10	270 00 [m]	1 4849D-09	1 6619D-09	1 6913D-09	1 5661D-09	1 3206D-09
11	300 00 [m]	1 3969D-12	1 5892D-12	1 6522D-12	1 5731D-12	1 3755D-12
ROW	COLUMN	16	17	18	19	20
[m]	150 00	160 00	170 00	180 00	190 00	
1	0 00 [m]	1 6086D-02	1 0908D-02	6 7382D-03	3 7910D-03	1 9426D-03
2	30 00 [m]	1 7289D-01	1 1580D-01	7 0850D-02	3 9559D-02	2 0143D-02
3	60 00 [m]	6 5177D-01	4 3151D-01	2 6178D-01	1 4525D-01	7 3604D-02
4	90 00 [m]	8 3934D-01	5 5413D-01	3 3549D-01	1 8588D-01	9 4092D-02
5	120 00 [m]	3 6650D-01	2 4401D-01	1 4863D-01	8 2715D-02	4 2010D-02
6	150 00 [m]	5 5423D-02	3 7378D-02	2 2990D-02	1 2889D-02	6 5843D-03
7	180 00 [m]	2 9745D-03	2 0277D-03	1 2582D-03	7 1068D-04	3 6560D-04
8	210 00 [m]	5 7329D-05	3 9402D-05	2 4617D-05	1 4021D-05	7 2047D-06
9	240 00 [m]	3 9720D-07	2 7440D-07	1 7256D-07	9 8907D-08	5 1770D-08
10	270 00 [m]	1 0156D-09	7 1287D-10	4 5855D-10	2 7118D-10	1 4821D-10
11	300 00 [m]	1 1084D-12	8 2665D-13	5 7342D-13	3 7190D-13	2 2662D-13
ROW	COLUMN	21	22	23		

10	270	00	[m]	1	9880D-10	3	5720D-10	5	8687D-10	8	7591D-10	1	1878D-09
11	300	00	[m]	1	8087D-13	3	2836D-13	5	4244D-13	8	1489D-13	1	1160D-12
ROWCOLUMN		11		12		13		14		15			
	[m]	100	00	110	00	120	00	130	00	140	00		
1	0	00	[m]	2	6682D-02	2	8843D-02	2	8409D-02	2	5506D-02	2	0875D-02
2	30	00	[m]	3	2738D-01	3	3934D-01	3	2324D-01	2	8271D-01	2	2673D-01
3	60	00	[m]	1	4597D+00	1	4247D+00	1	3002D+00	1	1030D+00	8	6549D-01
4	90	00	[m]	1	9733D+00	1	8901D+00	1	7037D+00	1	4332D+00	1	1183D+00
5	120	00	[m]	7	5223D-01	7	5819D-01	7	0755D-01	6	0964D-01	4	8362D-01
6	150	00	[m]	9	6950D-02	1	0311D-01	1	0021D-01	8	9005D-02	7	2222D-02
7	180	00	[m]	4	7249D-03	5	1725D-03	5	1506D-03	4	6669D-03	3	8485D-03
8	210	00	[m]	8	6992D-05	9	6453D-05	9	7166D-05	8	8959D-05	7	4039D-05
9	240	00	[m]	5	9149D-07	6	5995D-07	6	6855D-07	6	1621D-07	5	1670D-07
10	270	00	[m]	1	4637D-09	1	6397D-09	1	6706D-09	1	5489D-09	1	3082D-09
11	300	00	[m]	1	3934D-12	1	5879D-12	1	6545D-12	1	5796D-12	1	3857D-12
ROWCOLUMN		16		17		18		19		20			
	[m]	150	00	160	00	170	00	180	00	190	00		
1	0	00	[m]	1	5571D-02	1	0584D-02	6	5535D-03	3	6958D-03	1	8982D-03
2	30	00	[m]	1	6651D-01	1	1183D-01	6	8608D-02	3	8411D-02	1	9610D-02
3	60	00	[m]	6	2572D-01	4	1550D-01	2	5281D-01	1	4068D-01	7	1494D-02
4	90	00	[m]	8	0528D-01	5	3327D-01	3	2383D-01	1	7995D-01	9	1355D-02
5	120	00	[m]	3	5235D-01	2	3526D-01	1	4371D-01	8	0203D-02	4	0846D-02
6	150	00	[m]	5	3512D-02	3	6181D-02	2	2310D-02	1	2539D-02	6	4218D-03
7	180	00	[m]	2	8886D-03	1	9734D-03	1	2271D-03	6	9461D-04	3	5809D-04
8	210	00	[m]	5	6034D-05	3	8579D-05	2	4146D-05	1	3778D-05	7	0929D-06
9	240	00	[m]	3	9082D-07	2	7041D-07	1	7034D-07	9	7827D-08	5	1325D-08
10	270	00	[m]	1	0079D-09	7	0911D-10	4	5744D-10	2	7149D-10	1	4904D-10
11	300	00	[m]	1	1210D-12	8	3986D-13	5	8564D-13	3	8201D-13	2	3417D-13
ROWCOLUMN		21		22		23							
	[m]	200	00	210	00	220	00						
1	0	00	[m]	8	8831D-04	3	7850D-04	1	4609D-04				
2	30	00	[m]	9	1254D-03	3	8708D-03	1	4957D-03				
3	60	00	[m]	3	3149D-02	1	4015D-02	5	4037D-03				
4	90	00	[m]	4	2324D-02	1	7882D-02	6	8905D-03				

ROW\COLUMN	11	12	13	14	15	
[m]	100 00	110 00	120 00	130 00	140 00	
1	0 00 [m]	2 0957D-02	2 2740D-02	2 2479D-02	2 0251D-02	1 6627D-02
2	30 00 [m]	2 5204D-01	2 6340D-01	2 5262D-01	2 2222D-01	1 7910D-01
3	60 00 [m]	1 0959D+00	1 0873D+00	1 0042D+00	8 5956D-01	6 7923D-01
4	90 00 [m]	1 4702D+00	1 4358D+00	1 3119D+00	1 1146D+00	8 7630D-01
5	120 00 [m]	5 7230D-01	5 8367D-01	5 4968D-01	4 7706D-01	3 8071D-01
6	150 00 [m]	7 5515D-02	8 0744D-02	7 8850D-02	7 0337D-02	5 7300D-02
7	180 00 [m]	3 7404D-03	4 1057D-03	4 0993D-03	3 7243D-03	3 0793D-03
8	210 00 [m]	6 9680D-05	7 7385D-05	7 8091D-05	7 1625D-05	5 9723D-05
9	240 00 [m]	4 7834D-07	5 3434D-07	5 4199D-07	5 0030D-07	4 2020D-07
10	270 00 [m]	1 1941D-09	1 3392D-09	1 3663D-09	1 2690D-09	1 0741D-09
11	300 00 [m]	1 1555D-12	1 3204D-12	1 3803D-12	1 3232D-12	1 1666D-12
ROW\COLUMN	16	17	18	19	20	
[m]	150 00	160 00	170 00	180 00	190 00	
1	0 00 [m]	1 2441D-02	8 4816D-03	5 2665D-03	2 9781D-03	1 5336D-03
2	30 00 [m]	1 3211D-01	8 9074D-02	5 4843D-02	3 0807D-02	1 5777D-02
3	60 00 [m]	4 9388D-01	3 2956D-01	2 0138D-01	1 1249D-01	5 7367D-02
4	90 00 [m]	6 3490D-01	4 2258D-01	2 5775D-01	1 4380D-01	7 3264D-02
5	120 00 [m]	2 7877D-01	1 8696D-01	1 1466D-01	6 4218D-02	3 2814D-02
6	150 00 [m]	4 2610D-02	2 8908D-02	1 7882D-02	1 0081D-02	5 1773D-03
7	180 00 [m]	2 3172D-03	1 5870D-03	9 8927D-04	5 6136D-04	2 8985D-04
8	210 00 [m]	4 5286D-05	3 1241D-05	1 9594D-05	1 1206D-05	5 7776D-06
9	240 00 [m]	3 1814D-07	2 2052D-07	1 3921D-07	8 0152D-08	4 2188D-08
10	270 00 [m]	8 2971D-10	5 8564D-10	3 7939D-10	2 2640D-10	1 2514D-10
11	300 00 [m]	9 4948D-13	7 1642D-13	5 0357D-13	3 3133D-13	2 0494D-13
ROW\COLUMN	21	22	23			
[m]	200 00	210 00	220 00			
1	0 00 [m]	7 1895D-04	3 0742D-04	1 1891D-04		
2	30 00 [m]	7 3633D-03	3 1323D-03	1 2138D-03		
3	60 00 [m]	2 6685D-02	1 1317D-02	4 3763D-03		
4	90 00 [m]	3 4055D-02	1 4433D-02	5 5781D-03		
5	120 00 [m]	1 5287D-02	6 4917D-03	2 5114D-03		
6	150 00 [m]	2 4225D-03	1 0322D-03	4 0153D-04		
7	180 00 [m]	1 3646D-04	5 8104D-05	2 2648D-05		
8	210 00 [m]	2 7319D-06	1 1795D-06	4 6653D-07		
9	240 00 [m]	2 0353D-08	9 0555D-09	3 7412D-09		
10	270 00 [m]	6 4518D-11	3 1274D-11	1 4364D-11		

11	300 00 [m]	1 1950D-13 6 5774D-14 3 4143D-14				

* *			
* INTERNATIONAL GROUND WATER MODELING CENTER *			
* *			
* SOLUTE version 3.0 *			
* *			
* ANALYTICAL MODELS FOR SOLUTE TRANSPORT *			
* *			

Model PLUME3D			
PROJECT	= east trenches		
USER NAME	= pottorff		
DATE	= 12-18-1998		
DATA FILE	= c \dosapp\solute\etp50.dat		
INPUT DATA			
GROUNDWATER (SEEPAGE) VELOCITY	= 02 [m/d]		
POROSITY	= 2		
LONGITUDINAL DISPERSIVITY	= 6 [m]		
LATERAL DISPERSIVITY	= 5 [m]		
VERTICAL DISPERSIVITY	= 3 [m]		
HALF-LIFE	= 0 [d]		
NUMBER OF POINT SOURCES	= 10		
SOURCE NO 1			
X-COORDINATE OF THE SOURCE	= 30 [m]		
Y-COORDINATE OF THE SOURCE	= 82 [m]		
Z-COORDINATE OF THE SOURCE	= 0 [m]		
SOURCE STRENGTH	= 00225 [kg/d]		
ELAPSED TIME	= 10585 [d]		
SOURCE NO 2			
X-COORDINATE OF THE SOURCE	= 30 [m]		
Y-COORDINATE OF THE SOURCE	= 82 [m]		
Z-COORDINATE OF THE SOURCE	= 1 [m]		
SOURCE STRENGTH	= 0003 [kg/d]		
ELAPSED TIME	= 11680 [d]		
SOURCE NO 3			

X-COORDINATE OF THE SOURCE	= 30 [m]		
Y-COORDINATE OF THE SOURCE	= 82 [m]		
Z-COORDINATE OF THE SOURCE	= 2 [m]		
SOURCE STRENGTH	= 0003 [kg/d]		
ELAPSED TIME	= 11680 [d]		
SOURCE NO 4			
X-COORDINATE OF THE SOURCE	= 30 [m]		
Y-COORDINATE OF THE SOURCE	= 82 [m]		
Z-COORDINATE OF THE SOURCE	= 3 [m]		
SOURCE STRENGTH	= 0003 [kg/d]		
ELAPSED TIME	= 11680 [d]		
SOURCE NO 5			
X-COORDINATE OF THE SOURCE	= 30 [m]		
Y-COORDINATE OF THE SOURCE	= 82 [m]		
Z-COORDINATE OF THE SOURCE	= 4 [m]		
SOURCE STRENGTH	= 0003 [kg/d]		
ELAPSED TIME	= 11680 [d]		
SOURCE NO 6			
X-COORDINATE OF THE SOURCE	= 30 [m]		
Y-COORDINATE OF THE SOURCE	= 82 [m]		
Z-COORDINATE OF THE SOURCE	= 5 [m]		
SOURCE STRENGTH	= 0003 [kg/d]		
ELAPSED TIME	= 11680 [d]		
SOURCE NO 7			
X-COORDINATE OF THE SOURCE	= 30 [m]		
Y-COORDINATE OF THE SOURCE	= 82 [m]		
Z-COORDINATE OF THE SOURCE	= 6 [m]		
SOURCE STRENGTH	= 0003 [kg/d]		
ELAPSED TIME	= 11680 [d]		
SOURCE NO 8			
X-COORDINATE OF THE SOURCE	= 30 [m]		
Y-COORDINATE OF THE SOURCE	= 82 [m]		
Z-COORDINATE OF THE SOURCE	= 7 [m]		
SOURCE STRENGTH	= 0003 [kg/d]		
ELAPSED TIME	= 11680 [d]		
SOURCE NO 9			
X-COORDINATE OF THE SOURCE	= 30 [m]		
Y-COORDINATE OF THE SOURCE	= 82 [m]		
Z-COORDINATE OF THE SOURCE	= 8 [m]		
SOURCE STRENGTH	= 0003 [kg/d]		
ELAPSED TIME	= 11680 [d]		
SOURCE NO 10			

X-COORDINATE OF THE SOURCE	= 30 [m]				
Y-COORDINATE OF THE SOURCE	= 82 [m]				
Z-COORDINATE OF THE SOURCE	= 9 [m]				
SOURCE STRENGTH	= 000001 [kg/d]				
ELAPSED TIME	= 18250 [d]				
GRID DATA					
X-COORDINATE OF GRID ORIGIN	= 0 [m]				
Y-COORDINATE OF GRID ORIGIN	= 0 [m]				
Z-COORDINATE OF GRID ORIGIN	= 0 [m]				
DISTANCE INCREMENT DELX	= 10 [m]				
DISTANCE INCREMENT DELY	= 30 [m]				
DISTANCE INCREMENT DELZ	= 10 [m]				
NUMBER OF NODES IN X-DIRECTION	= 23				
NUMBER OF NODES IN Y-DIRECTION	= 11				
NUMBER OF NODES IN Z-DIRECTION	= 3				
CONCENTRATION C [mg/l] - LAYER 1					
ROWCOLUMN	1	2	3	4	5
[m]	0 00	10 00	20 00	30 00	40 00
1	0 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 0521D-03
2	30 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 9097D-02
3	60 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	2 8447D-01
4	90 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 5260D+00
5	120 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	6 5335D-02
6	150 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	4 3568D-03
7	180 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 7067D-04
8	210 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	2 9082D-06
9	240 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 9533D-08
10	270 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	6 1648D-11
11	300 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	2 6596D-13
ROWCOLUMN	6	7	8	9	10
[m]	50 00	60 00	70 00	80 00	90 00
1	0 00 [m]	4 4878D-03	7 9020D-03	1 2552D-02	1 8041D-02
2	30 00 [m]	7 6532D-02	1 2633D-01	1 8679D-01	2 5036D-01
3	60 00 [m]	8 0335D-01	1 0254D+00	1 2209D+00	1 3862D+00

4	90 00 [m]	1 8566D+00	1 8585D+00	1 9339D+00	2 0302D+00	2 0992D+00
5	120 00 [m]	2 4030D-01	3 6696D-01	5 0293D-01	6 3187D-01	7 3534D-01
6	150 00 [m]	1 8244D-02	3 1490D-02	4 8874D-02	6 8600D-02	8 7479D-02
7	180 00 [m]	7 3598D-04	1 3117D-03	2 1147D-03	3 0880D-03	4 0901D-03
8	210 00 [m]	1 2649D-05	2 2768D-05	3 7170D-05	5 5061D-05	7 4051D-05
9	240 00 [m]	8 5367D-08	1 5461D-07	2 5462D-07	3 8161D-07	5 2117D-07
10	270 00 [m]	2 7473D-10	5 0782D-10	8 6867D-10	1 3733D-09	2 0165D-09
11	300 00 [m]	1 2392D-12	2 4329D-12	4 4896D-12	7 7978D-12	1 2765D-11
ROW\COLUMN		11	12	13	14	15
	[m]	100 00	110 00	120 00	130 00	140 00
1	0 00 [m]	2 7883D-02	3 0089D-02	2 9588D-02	2 6526D-02	2 1687D-02
2	30 00 [m]	3 4478D-01	3 5634D-01	3 3852D-01	2 9534D-01	2 3632D-01
3	60 00 [m]	1 5490D+00	1 5046D+00	1 3677D+00	1 1564D+00	9 0477D-01
4	90 00 [m]	2 0985D+00	1 9990D+00	1 7941D+00	1 5039D+00	1 1698D+00
5	120 00 [m]	7 9519D-01	7 9850D-01	7 4276D-01	6 3811D-01	5 0487D-01
6	150 00 [m]	1 0167D-01	1 0789D-01	1 0464D-01	9 2750D-02	7 5130D-02
7	180 00 [m]	4 9198D-03	5 3798D-03	5 3521D-03	4 8475D-03	3 9998D-03
8	210 00 [m]	9 0477D-05	1 0051D-04	1 0163D-04	9 3669D-05	7 8889D-05
9	240 00 [m]	6 4981D-07	7 4187D-07	7 7836D-07	7 5686D-07	6 8863D-07
10	270 00 [m]	2 7673D-09	3 5756D-09	4 3843D-09	5 1389D-09	5 7878D-09
11	300 00 [m]	1 9716D-11	2 8760D-11	3 9639D-11	5 1625D-11	6 3517D-11
ROW\COLUMN		16	17	18	19	20
	[m]	150 00	160 00	170 00	180 00	190 00
1	0 00 [m]	1 6176D-02	1 1013D-02	6 8527D-03	3 9088D-03	2 0563D-03
2	30 00 [m]	1 7322D-01	1 1619D-01	7 1279D-02	4 0007D-02	2 0581D-02
3	60 00 [m]	6 5241D-01	4 3228D-01	2 6265D-01	1 4617D-01	7 4518D-02
4	90 00 [m]	8 4007D-01	5 5501D-01	3 3649D-01	1 8694D-01	9 5141D-02
5	120 00 [m]	3 6697D-01	2 4458D-01	1 4928D-01	8 3392D-02	4 2675D-02
6	150 00 [m]	5 5599D-02	3 7586D-02	2 3219D-02	1 3126D-02	6 8148D-03
7	180 00 [m]	3 0095D-03	2 0681D-03	1 3020D-03	7 5538D-04	4 0842D-04
8	210 00 [m]	6 0961D-05	4 3526D-05	2 9024D-05	1 8451D-05	1 1392D-05
9	240 00 [m]	5 9089D-07	4 9147D-07	4 0162D-07	3 2643D-07	2 6444D-07
10	270 00 [m]	6 2782D-09	6 5536D-09	6 5627D-09	6 2776D-09	5 7121D-09
11	300 00 [m]	7 3798D-11	8 0928D-11	8 3719D-11	8 1668D-11	7 4325D-11
ROW\COLUMN		21	22	23		

10	270 00 [m]	2 7471D-10 5 0854D-10 8 7175D-10 1 3821D-09 2 0366D-09
11	300 00 [m]	1 2884D-12 2 5311D-12 4 6748D-12 8 1275D-12 1 3318D-11
ROW	COLUMN	11 12 13 14 15
	[m]	100 00 110 00 120 00 130 00 140 00
1	0 00 [m]	2 6699D-02 2 8870D-02 2 8450D-02 2 5563D-02 2 0950D-02
2	30 00 [m]	3 2744D-01 3 3942D-01 3 2338D-01 2 8291D-01 2 2700D-01
3	60 00 [m]	1 4598D+00 1 4248D+00 1 3004D+00 1 1033D+00 8 6600D-01
4	90 00 [m]	1 9734D+00 1 8903D+00 1 7040D+00 1 4337D+00 1 1188D+00
5	120 00 [m]	7 5231D-01 7 5832D-01 7 0775D-01 6 0992D-01 4 8400D-01
6	150 00 [m]	9 6981D-02 1 0316D-01 1 0029D-01 8 9114D-02 7 2368D-02
7	180 00 [m]	4 7321D-03 5 1837D-03 5 1670D-03 4 6896D-03 3 8783D-03
8	210 00 [m]	8 7815D-05 9 7709D-05 9 8975D-05 9 1418D-05 7 7189D-05
9	240 00 [m]	6 3855D-07 7 3083D-07 7 6926D-07 7 5114D-07 6 8712D-07
10	270 00 [m]	2 8067D-09 3 6440D-09 4 4913D-09 5 2915D-09 5 9881D-09
11	300 00 [m]	2 0591D-11 3 0063D-11 4 1466D-11 5 4038D-11 6 6520D-11
ROW	COLUMN	16 17 18 19 20
	[m]	150 00 160 00 170 00 180 00 190 00
1	0 00 [m]	1 5665D-02 1 0693D-02 6 6732D-03 3 8189D-03 2 0172D-03
2	30 00 [m]	1 6685D-01 1 1223D-01 6 9055D-02 3 8878D-02 2 0068D-02
3	60 00 [m]	6 2639D-01 4 1631D-01 2 5373D-01 1 4165D-01 7 2449D-02
4	90 00 [m]	8 0604D-01 5 3419D-01 3 2487D-01 1 8105D-01 9 2451D-02
5	120 00 [m]	3 5284D-01 2 3586D-01 1 4439D-01 8 0909D-02 4 1542D-02
6	150 00 [m]	5 3695D-02 3 6398D-02 2 2549D-02 1 2787D-02 6 6628D-03
7	180 00 [m]	2 9252D-03 2 0156D-03 1 2729D-03 7 4137D-04 4 0290D-04
8	210 00 [m]	5 9834D-05 4 2894D-05 2 8758D-05 1 8415D-05 1 1477D-05
9	240 00 [m]	5 9361D-07 4 9772D-07 4 1025D-07 3 3616D-07 2 7413D-07
10	270 00 [m]	6 5217D-09 6 8292D-09 6 8541D-09 6 5664D-09 5 9807D-09
11	300 00 [m]	7 7316D-11 8 4808D-11 8 7749D-11 8 5610D-11 7 7935D-11
ROW	COLUMN	21 22 23
	[m]	200 00 210 00 220 00
1	0 00 [m]	9 9607D-04 4 7012D-04 2 1919D-04
2	30 00 [m]	9 5452D-03 4 2315D-03 1 7862D-03
3	60 00 [m]	3 4031D-02 1 4779D-02 6 0227D-03
4	90 00 [m]	4 3339D-02 1 8762D-02 7 6044D-03

ROW\COLUMN	11	12	13	14	15	
[m]	100 00	110 00	120 00	130 00	140 00	
1	0 00 [m]	2 0973D-02	2 2765D-02	2 2517D-02	2 0304D-02	1 6698D-02
2	30 00 [m]	2 5209D-01	2 6348D-01	2 5275D-01	2 2240D-01	1 7935D-01
3	60 00 [m]	1 0960D+00	1 0875D+00	1 0044D+00	8 5991D-01	6 7972D-01
4	90 00 [m]	1 4703D+00	1 4360D+00	1 3121D+00	1 1150D+00	8 7685D-01
5	120 00 [m]	5 7237D-01	5 8379D-01	5 4986D-01	4 7733D-01	3 8107D-01
6	150 00 [m]	7 5545D-02	8 0792D-02	7 8922D-02	7 0439D-02	5 7437D-02
7	180 00 [m]	3 7471D-03	4 1162D-03	4 1147D-03	3 7456D-03	3 1071D-03
8	210 00 [m]	7 0450D-05	7 8560D-05	7 9785D-05	7 3925D-05	6 2667D-05
9	240 00 [m]	5 2232D-07	6 0056D-07	6 3606D-07	6 2630D-07	5 7930D-07
10	270 00 [m]	2 4472D-09	3 2092D-09	3 9977D-09	4 7598D-09	5 4385D-09
11	300 00 [m]	1 9051D-11	2 7862D-11	3 8487D-11	5 0213D-11	6 1864D-11
ROW\COLUMN	16	17	18	19	20	
[m]	150 00	160 00	170 00	180 00	190 00	
1	0 00 [m]	1 2529D-02	8 5838D-03	5 3785D-03	3 0932D-03	1 6448D-03
2	30 00 [m]	1 3242D-01	8 9450D-02	5 5262D-02	3 1244D-02	1 6205D-02
3	60 00 [m]	4 9451D-01	3 3032D-01	2 0223D-01	1 1339D-01	5 8261D-02
4	90 00 [m]	6 3561D-01	4 2345D-01	2 5873D-01	1 4483D-01	7 4290D-02
5	120 00 [m]	2 7924D-01	1 8752D-01	1 1529D-01	6 4879D-02	3 3465D-02
6	150 00 [m]	4 2782D-02	2 9111D-02	1 8106D-02	1 0313D-02	5 4027D-03
7	180 00 [m]	2 3514D-03	1 6265D-03	1 0321D-03	6 0506D-04	3 3170D-04
8	210 00 [m]	4 8837D-05	3 5272D-05	2 3901D-05	1 5535D-05	9 8693D-06
9	240 00 [m]	5 0742D-07	4 3264D-07	3 6303D-07	3 0245D-07	2 4996D-07
10	270 00 [m]	5 9711D-09	6 2915D-09	6 3423D-09	6 0936D-09	5 5598D-09
11	300 00 [m]	7 1948D-11	7 8951D-11	8 1710D-11	7 9730D-11	7 2565D-11
ROW\COLUMN	21	22	23			
[m]	200 00	210 00	220 00			
1	0 00 [m]	8 1962D-04	3 9298D-04	1 8714D-04		
2	30 00 [m]	7 7558D-03	3 4693D-03	1 4850D-03		
3	60 00 [m]	2 7511D-02	1 2031D-02	4 9546D-03		
4	90 00 [m]	3 5005D-02	1 5256D-02	6 2452D-03		
5	120 00 [m]	1 5886D-02	7 0081D-03	2 9285D-03		
6	150 00 [m]	2 6279D-03	1 2076D-03	5 4203D-04		
7	180 00 [m]	1 7411D-04	8 9908D-05	4 7874D-05		
8	210 00 [m]	6 3683D-06	4 2173D-06	2 8518D-06		
9	240 00 [m]	2 0307D-07	1 6020D-07	1 2132D-07		
10	270 00 [m]	4 8030D-09	3 9200D-09	3 0185D-09		

11	300	00 [m]	6	2601D-11	5	0809D-11	3	8784D-11

* INTERNATIONAL GROUND WATER MODELING CENTER *

SOLUTE version 3.0

* ANALYTICAL MODELS FOR SOLUTE TRANSPORT

Model PLUME3D

PROJECT = east trenches

USER NAME = pottorff

DATE = 12-18-1998

DATA FILE = c \dosapp\solute\etp100.dat

INPUT DATA

GROUNDWATER (SEEPAGE) VELOCITY = 02 [m/d]

POROSITY = 2

LONGITUDINAL DISPERSIVITY = 6 [m]

LATERAL DISPERSIVITY = 5 [m]

VERTICAL DISPERSIVITY = 3 [m]

HALF-LIFE = 0 [d]

NUMBER OF POINT SOURCES = 10

SOURCE NO 1

X-COORDINATE OF THE SOURCE = 30 [m]

Y-COORDINATE OF THE SOURCE = 82 [m]

Z-COORDINATE OF THE SOURCE = 0 [m]

SOURCE STRENGTH = 00225 [kg/d]

ELAPSED TIME = 10585 [d]

SOURCE NO 2

X-COORDINATE OF THE SOURCE = 30 [m]

Y-COORDINATE OF THE SOURCE = 82 [m]

Z-COORDINATE OF THE SOURCE = 1 [m]

SOURCE STRENGTH = 0003 [kg/d]

ELAPSED TIME = 11680 [d]

SOURCE NO 3

X-COORDINATE OF THE SOURCE	= 30 [m]			
Y-COORDINATE OF THE SOURCE	= 82 [m]			
Z-COORDINATE OF THE SOURCE	= 2 [m]			
SOURCE STRENGTH	= 0003 [kg/d]			
ELAPSED TIME	= 11680 [d]			
SOURCE NO 4				
X-COORDINATE OF THE SOURCE	= 30 [m]			
Y-COORDINATE OF THE SOURCE	= 82 [m]			
Z-COORDINATE OF THE SOURCE	= 3 [m]			
SOURCE STRENGTH	= 0003 [kg/d]			
ELAPSED TIME	= 11680 [d]			
SOURCE NO 5				
X-COORDINATE OF THE SOURCE	= 30 [m]			
Y-COORDINATE OF THE SOURCE	= 82 [m]			
Z-COORDINATE OF THE SOURCE	= 4 [m]			
SOURCE STRENGTH	= 0003 [kg/d]			
ELAPSED TIME	= 11680 [d]			
SOURCE NO 6				
X-COORDINATE OF THE SOURCE	= 30 [m]			
Y-COORDINATE OF THE SOURCE	= 82 [m]			
Z-COORDINATE OF THE SOURCE	= 5 [m]			
SOURCE STRENGTH	= 0003 [kg/d]			
ELAPSED TIME	= 11680 [d]			
SOURCE NO 7				
X-COORDINATE OF THE SOURCE	= 30 [m]			
Y-COORDINATE OF THE SOURCE	= 82 [m]			
Z-COORDINATE OF THE SOURCE	= 6 [m]			
SOURCE STRENGTH	= 0003 [kg/d]			
ELAPSED TIME	= 11680 [d]			
SOURCE NO 8				
X-COORDINATE OF THE SOURCE	= 30 [m]			
Y-COORDINATE OF THE SOURCE	= 82 [m]			
Z-COORDINATE OF THE SOURCE	= 7 [m]			
SOURCE STRENGTH	= 0003 [kg/d]			
ELAPSED TIME	= 11680 [d]			
SOURCE NO 9				
X-COORDINATE OF THE SOURCE	= 30 [m]			
Y-COORDINATE OF THE SOURCE	= 82 [m]			
Z-COORDINATE OF THE SOURCE	= 8 [m]			
SOURCE STRENGTH	= 0003 [kg/d]			
ELAPSED TIME	= 11680 [d]			
SOURCE NO 10				

X-COORDINATE OF THE SOURCE	= 30 [m]					
Y-COORDINATE OF THE SOURCE	= 82 [m]					
Z-COORDINATE OF THE SOURCE	= 9 [m]					
SOURCE STRENGTH	= 000001 [kg/d]					
ELAPSED TIME	= 36500 [d]					
GRID DATA						
X-COORDINATE OF GRID ORIGIN	= 0 [m]					
Y-COORDINATE OF GRID ORIGIN	= 0 [m]					
Z-COORDINATE OF GRID ORIGIN	= 0 [m]					
DISTANCE INCREMENT DELX	= 10 [m]					
DISTANCE INCREMENT DELY	= 30 [m]					
DISTANCE INCREMENT DELZ	= 10 [m]					
NUMBER OF NODES IN X-DIRECTION	= 23					
NUMBER OF NODES IN Y-DIRECTION	= 11					
NUMBER OF NODES IN Z-DIRECTION	= 3					
CONCENTRATION C [mg/l] - LAYER 1						
ROWCOLUMN	1	2	3	4	5	
[m]	0 00	10 00	20 00	30 00	40 00	
1	0 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 0522D-03	2 2934D-03
2	30 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 9097D-02	4 0936D-02
3	60 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	2 8447D-01	5 4753D-01
4	90 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 5260D+00	1 9537D+00
5	120 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	6 5335D-02	1 3673D-01
6	150 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	4 3570D-03	9 4504D-03
7	180 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 7076D-04	3 7325D-04
8	210 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	2 9358D-06	6 4332D-06
9	240 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	2 5233D-08	5 5757D-08
10	270 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	9 6085D-10	2 1752D-09
11	300 00 [m]	0 0000D+00	0 0000D+00	0 0000D+00	1 1487D-10	2 6068D-10
ROWCOLUMN	6	7	8	9	10	
[m]	50 00	60 00	70 00	80 00	90 00	
1	0 00 [m]	4 4885D-03	7 9036D-03	1 2556D-02	1 8048D-02	2 3537D-02
2	30 00 [m]	7 6533D-02	1 2634D-01	1 8680D-01	2 5038D-01	3 0670D-01
3	60 00 [m]	8 0335D-01	1 0254D+00	1 2209D+00	1 3863D+00	1 5036D+00

4	90 00 [m]	1 8566D+00	1 8585D+00	1 9339D+00	2 0302D+00	2 0992D+00
5	120 00 [m]	2 4030D-01	3 6697D-01	5 0293D-01	6 3188D-01	7 3537D-01
6	150 00 [m]	1 8245D-02	3 1492D-02	4 8879D-02	6 8610D-02	8 7498D-02
7	180 00 [m]	7 3644D-04	1 3127D-03	2 1168D-03	3 0922D-03	4 0982D-03
8	210 00 [m]	1 2786D-05	2 3061D-05	3 7776D-05	5 6275D-05	7 6410D-05
9	240 00 [m]	1 1377D-07	2 1519D-07	3 8001D-07	6 3352D-07	1 0125D-06
10	270 00 [m]	4 7684D-09	1 0129D-08	2 0886D-08	4 1856D-08	8 1621D-08
11	300 00 [m]	5 7544D-10	1 2357D-09	2 5815D-09	5 2476D-09	1 0381D-08
ROW\COLUMN		11	12	13	14	15
[m]		100 00	110 00	120 00	130 00	140 00
1	0 00 [m]	2 7909D-02	3 0137D-02	2 9673D-02	2 6672D-02	2 1932D-02
2	30 00 [m]	3 4483D-01	3 5643D-01	3 3870D-01	2 9564D-01	2 3683D-01
3	60 00 [m]	1 5491D+00	1 5047D+00	1 3680D+00	1 1569D+00	9 0552D-01
4	90 00 [m]	2 0986D+00	1 9991D+00	1 7943D+00	1 5044D+00	1 1706D+00
5	120 00 [m]	7 9525D-01	7 9862D-01	7 4297D-01	6 3848D-01	5 0551D-01
6	150 00 [m]	1 0171D-01	1 0796D-01	1 0476D-01	9 2964D-02	7 5490D-02
7	180 00 [m]	4 9353D-03	5 4081D-03	5 4024D-03	4 9339D-03	4 1437D-03
8	210 00 [m]	9 4921D-05	1 0863D-04	1 1603D-04	1 1847D-04	1 2041D-04
9	240 00 [m]	1 5807D-06	2 4559D-06	3 8467D-06	6 1012D-06	9 7512D-06
10	270 00 [m]	1 5501D-07	2 8688D-07	5 1749D-07	9 0998D-07	1 5599D-06
11	300 00 [m]	1 9989D-08	3 7470D-08	6 8388D-08	1 2155D-07	2 1040D-07
ROW\COLUMN		16	17	18	19	20
[m]		150 00	160 00	170 00	180 00	190 00
1	0 00 [m]	1 6571D-02	1 1632D-02	7 7947D-03	5 3026D-03	4 0665D-03
2	30 00 [m]	1 7404D-01	1 1749D-01	7 3255D-02	4 2918D-02	2 4749D-02
3	60 00 [m]	6 5365D-01	4 3424D-01	2 6563D-01	1 5056D-01	8 0782D-02
4	90 00 [m]	8 4141D-01	5 5712D-01	3 3971D-01	1 9168D-01	1 0191D-01
5	120 00 [m]	3 6801D-01	2 4622D-01	1 5177D-01	8 7064D-02	4 7925D-02
6	150 00 [m]	5 6182D-02	3 8498D-02	2 4605D-02	1 5171D-02	9 7524D-03
7	180 00 [m]	3 2419D-03	2 4329D-03	1 8589D-03	1 5837D-03	1 6106D-03
8	210 00 [m]	1 2859D-04	1 5079D-04	1 9488D-04	2 6870D-04	3 8010D-04
9	240 00 [m]	1 5562D-05	2 4599D-05	3 8260D-05	5 8331D-05	8 6996D-05
10	270 00 [m]	2 6070D-06	4 2478D-06	6 7482D-06	1 0453D-05	1 5785D-05
11	300 00 [m]	3 5472D-07	5 8254D-07	9 3188D-07	1 4521D-06	2 2038D-06
ROW\COLUMN		21	22	23		

10	270	00	[m]	4	8733D-09	1	0354D-08	2	1354D-08	4	2803D-08	8	3478D-08
11	300	00	[m]	5	8830D-10	1	2633D-09	2	6390D-09	5	3643D-09	1	0612D-08
ROW	COLUMN			11	12	13	14	15					
		[m]		100	00	110	00	120	00	130	00	140	00
1	0	00	[m]	2	6726D-02	2	8919D-02	2	8537D-02	2	5713D-02	2	1201D-02
2	30	00	[m]	3	2749D-01	3	3952D-01	3	2355D-01	2	8322D-01	2	2752D-01
3	60	00	[m]	1	4599D+00	1	4250D+00	1	3007D+00	1	1038D+00	8	6677D-01
4	90	00	[m]	1	9734D+00	1	8905D+00	1	7042D+00	1	4341D+00	1	1197D+00
5	120	00	[m]	7	5237D-01	7	5844D-01	7	0796D-01	6	1030D-01	4	8466D-01
6	150	00	[m]	9	7019D-02	1	0323D-01	1	0041D-01	8	9334D-02	7	2737D-02
7	180	00	[m]	4	7479D-03	5	2127D-03	5	2185D-03	4	7781D-03	4	0257D-03
8	210	00	[m]	9	2369D-05	1	0603D-04	1	1373D-04	1	1683D-04	1	1973D-04
9	240	00	[m]	1	5920D-06	2	4859D-06	3	9107D-06	6	2219D-06	9	9621D-06
10	270	00	[m]	1	5855D-07	2	9342D-07	5	2926D-07	9	3058D-07	1	5951D-06
11	300	00	[m]	2	0432D-08	3	8297D-08	6	9894D-08	1	2422D-07	2	1500D-07
ROW	COLUMN			16	17	18	19	20					
		[m]		150	00	160	00	170	00	180	00	190	00
1	0	00	[m]	1	6070D-02	1	1328D-02	7	6386D-03	5	2470D-03	4	0761D-03
2	30	00	[m]	1	6770D-01	1	1357D-01	7	1081D-02	4	1861D-02	2	4338D-02
3	60	00	[m]	6	2765D-01	4	1831D-01	2	5678D-01	1	4614D-01	7	8869D-02
4	90	00	[m]	8	0741D-01	5	3635D-01	3	2817D-01	1	8591D-01	9	9387D-02
5	120	00	[m]	3	5391D-01	2	3754D-01	1	4694D-01	8	4673D-02	4	6922D-02
6	150	00	[m]	5	4293D-02	3	7333D-02	2	3970D-02	1	4883D-02	9	6724D-03
7	180	00	[m]	3	1634D-03	2	3894D-03	1	8434D-03	1	5897D-03	1	6338D-03
8	210	00	[m]	1	2910D-04	1	5273D-04	1	9855D-04	2	7452D-04	3	8872D-04
9	240	00	[m]	1	5912D-05	2	5160D-05	3	9131D-05	5	9652D-05	8	8949D-05
10	270	00	[m]	2	6654D-06	4	3423D-06	6	8976D-06	1	0683D-05	1	6131D-05
11	300	00	[m]	3	6247D-07	5	9524D-07	9	5216D-07	1	4836D-06	2	2516D-06
ROW	COLUMN			21	22	23							
		[m]		200	00	210	00	220	00				
1	0	00	[m]	3	8945D-03	4	4594D-03	5	5936D-03				
2	30	00	[m]	1	5503D-02	1	2347D-02	1	2604D-02				
3	60	00	[m]	4	2951D-02	2	6866D-02	2	2036D-02				
4	90	00	[m]	5	2971D-02	3	1802D-02	2	4860D-02				

ROWCOLUMN	11	12	13	14	15		
[m]	100 00	110 00	120 00	130 00	140 00		
1	0 00 [m]	2 0999D-02	2 2812D-02	2 2601D-02	2 0449D-02	1 6940D-02	
2	30 00 [m]	1 5214D-01	2 6357D-01	2 5292D-01	2 2270D-01	1 7985D-01	
3	60 00 [m]	1 0961D+00	1 0876D+00	1 0047D+00	8 6035D-01	6 8046D-01	
4	90 00 [m]	1 4704D+00	1 4361D+00	1 3124D+00	1 1155D+00	8 7765D-01	
5	120 00 [m]	5 7243D-01	5 8390D-01	5 5007D-01	4 7770D-01	3 8170D-01	
6	150 00 [m]	7 5581D-02	8 0860D-02	7 9044D-02	7 0652D-02	5 7793D-02	
7	180 00 [m]	3 7624D-03	4 1442D-03	4 1644D-03	3 8309D-03	3 2492D-03	
8	210 00 [m]	7 4839D-05	8 6581D-05	9 4011D-05	9 8428D-05	1 0369D-04	
9	240 00 [m]	1 4422D-06	2 2943D-06	3 6685D-06	5 9087D-06	9 5376D-06	
10	270 00 [m]	1 5298D-07	2 8333D-07	5 1137D-07	8 9955D-07	1 5424D-06	
11	300 00 [m]	1 9771D-08	3 7063D-08	6 7648D-08	1 2024D-07	2 0813D-07	
ROWCOLUMN	16	17	18	19	20		
[m]	150 00	160 00	170 00	180 00	190 00		
1	0 00 [m]	1 2920D-02	9 1956D-03	6 3091D-03	4 4703D-03	3 6311D-03	
2	30 00 [m]	1 3324D-01	9 0735D-02	5 7214D-02	3 4120D-02	2 0322D-02	
3	60 00 [m]	4 9573D-01	3 3225D-01	2 0517D-01	1 1773D-01	6 4449D-02	
4	90 00 [m]	6 3693D-01	4 2553D-01	2 6191D-01	1 4951D-01	8 0976D-02	
5	120 00 [m]	2 8027D-01	1 8914D-01	1 1775D-01	6 8507D-02	3 8651D-02	
6	150 00 [m]	4 3358D-02	3 0012D-02	1 9475D-02	1 2333D-02	8 3050D-03	
7	180 00 [m]	2 5810D-03	1 9868D-03	1 5823D-03	1 4235D-03	1 5197D-03	
8	210 00 [m]	1 1566D-04	1 4127D-04	1 8783D-04	2 6290D-04	3 7438D-04	
9	240 00 [m]	1 5308D-05	2 4267D-05	3 7797D-05	5 7663D-05	8 6026D-05	
10	270 00 [m]	2 5781D-06	4 2012D-06	6 6747D-06	1 0339D-05	1 5615D-05	
11	300 00 [m]	3 5091D-07	5 7629D-07	9 2191D-07	1 4365D-06	2 1803D-06	
ROWCOLUMN	21	22	23				
[m]	200 00	210 00	220 00				
1	0 00 [m]	3 6170D-03	4 2452D-03	5 3795D-03			
2	30 00 [m]	1 3502D-02	1 1301D-02	1 1929D-02			
3	60 00 [m]	3 6111D-02	2 3690D-02	2 0409D-02			
4	90 00 [m]	4 4290D-02	2 7833D-02	2 2898D-02			
5	120 00 [m]	2 3106D-02	1 6819D-02	1 5967D-02			
6	150 00 [m]	6 6950D-03	6 7783D-03	8 0096D-03			
7	180 00 [m]	1 8590D-03	2 4269D-03	3 2200D-03			
8	210 00 [m]	5 3119D-04	7 4275D-04	1 0187D-03			
9	240 00 [m]	1 2540D-04	1 7850D-04	2 4807D-04			
10	270 00 [m]	2 2991D-05	3 2998D-05	4 6158D-05			

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11	300	00	[m]	3	2229D-06	4	6392D-06	6	5022D-06				